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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,924	07/08/2003	Robert Radulescu	P10-1301	9233

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BUCHANAN, INGERSOLL & ROONEY PC
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER	
MAKI, STEVEN D	

ART UNIT	PAPER NUMBER
1733	

NOTIFICATION DATE	DELIVERY MODE
10/01/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com
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Interview Summary	Application No.	Applicant(s)	
	10/614,924	RADULESCU, ROBERT	
	Examiner	Art Unit	
	Steven D. Maki	1733	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Steven D. Maki*. (3)_____.

(2) *Alan Kopecki*. (4)_____.

Date of Interview: *17 September 2007*.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☒ No.
If Yes, brief description: _____.

Claim(s) discussed: *1-11*.

Identification of prior art discussed: *art of record*.

Agreement with respect to the claims f)☒ was reached as to allowable subject matter g)☐ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *see Interview Summary Attachments A and B*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Steven D. Maki
Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)
In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Interview Summary Attachment A

Discussed claim proposed claim amendments. See Interview Summary Attachment B. Examiner noted that "areas" on next to last line of claim 9 should be --area--. Examiner also noted that claim identifier for claims 10 and 11 should be --(previously presented)--. In order to make applicant's arguments regarding the relationship between the rotation direction and angular relationship of the incisions commensurate in scope with the claim 1, examiner suggested amending claim 1 by (1) adding --single-- before "rolling direction" on line 2 and (2) inserting --single-- before "rolling direction" on line 4. Discussed Europe 104. In particular, discussed rotation direction in figures 2 and 5. In examiner's opinion, the rotation direction S in figure 2 is to the left. Since Europe 104 is addressing problem of wear (the rounded corners in figure 3) caused by the vehicle running a certain distance, Europe 104 identifies the forward direction V in figure 2 and describes the invention as improving "grip", examiner concludes that the tire is figure 2 is for an "accelerating" tire instead of a "braking tire". Since (a) Europe 104's use of curved sipes as shown in figure 4, addresses the problem of wear creating the rounded edges as shown in figure 3 and (b) shows the direction of deformation of rubber between the sipes, examiner concludes that the rotation direction in figure 5 is to the right and that the tire is "accelerating" instead of "braking". Discussed further amending claim 1 to specify directional nature of tread. Examiner agreed that if claim 1 was also amended to include the directional subject matter shown in figure 1 (all sipes V-shaped and oriented in same direction), then claim 1 would be

allowable. Examiner notes that this further modification of Europe 104, which is primarily concerned with blocks instead of ribs, would not have been obvious.

Interview Summary Attachment B

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Facsimile Cover Sheet

Date: SEPTEMBER 17, 2007

TO: **EXAMINER STEVEN D. MAKI**

Fax Number: **571-273-1221**

Company: PATENT & TRADEMARK OFFICE

Telephone:

Your Reference: SERIAL NO. 10/614,924

FROM: **ALAN E. KOPECKI**

Telephone: 1.703.838.6542

Our Reference: 1033818-000180

Sent By: MH

Number of Pages (including cover sheet) (11)

PROPOSED AMENDMENT

Interview Summary Attachment B

Patent
Attorney's Docket No. 1033818-000180

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	**MAIL STOP AMENDMENT**
Robert Radulescu	Group Art Unit: 1733
Application No.: 10/614,924	Examiner: STEVEN D MAKI
Filed: July 8, 2003	Confirmation No.: 9233
For: DIRECTIONAL TREAD HAVING INCISIONS OF VARYING INCLINATION	

AMENDMENT DRAFT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated March 20, 2007, please amend the above-identified patent application as follows:

AMENDMENTS TO THE SPECIFICATION:

Insert new paragraph 032.1 as follows:

[032.1] Each incision 41, from its point A to its point B, has a concave side and a convex side, the concave side facing in the rolling direction R (i.e., facing to the left in Fig. 2). In Fig. 3 the incisions 421 have generally concave and convex sides, and the generally concave side faces in the rolling direction R.

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A steer axle tire for a heavy vehicle, the tire designed for a rolling direction and comprising a radial carcass reinforcement surmounted by a crown reinforcement and a tread, the tire including a visual indicator indicating the rolling direction, the tread comprising ribs separated by grooves of generally circumferential orientation, two of said ribs forming the edges of the tread, and at least two of said ribs being intermediate such two edge ribs, the ~~at least one~~ intermediate ~~rib~~ ribs having a plurality of incisions of a width of less than 3 mm, a depth E when the tread is new and being of generally transverse orientation and substantially parallel to each other, wherein each incision has an angular relationship with a line extending perpendicular to the point where the incision intersects the tread's outer surface, the angular relationship varying along the incision wherein the angular relationship in an outer tread region extending from the outer surface to a depth of one-third E is zero degrees, and the angular relationship in an inner tread region at a depth greater than one-third E being greater than the angular relationship in the outer tread region, wherein a radially innermost first point of each incision is located, relative to the indicated rolling direction of the tire, in front of ~~the~~ a second point of the incision located on the running surface of the tread when new, wherein each incision ~~includes~~, from its second point to its first point, has a generally concave side and a generally convex side, the generally concave side

facing ~~generally toward the outer surface,~~ in the rolling direction and further wherein the two edge ribs are free of incisions having varying inclination.

2. (Previously Presented) The tire according to claim 1, wherein an average inclination of the incisions is between 5°and 15°.

3. (Previously Presented) The tire according to Claim 2, wherein the inclination of a portion of the incision at a depth greater than one-third E is between 5° and 25°.

4. (Currently Amended) The tire according to Claim 2, wherein the incisions are spaced in the circumferential direction with a pitch p which satisfies the following relationship:

$$0.5 \leq \frac{Sne}{Se} \cdot \frac{p}{H} \leq 4$$

wherein, Sne is the total outer surface area of the ~~at least one rib~~ edge ribs not provided with incisions of varying inclination,

Se is the total of the outer surface area of the ~~at least one rib~~ intermediate ribs provided with incisions of varying inclination, and

H is the average depth of the grooves of generally circumferential direction.

5. (Previously Presented) The tire according to Claim 1, wherein the inclination of a portion of the incision at a depth greater than one-third E is between 5° and 25°.

6. (Previously Presented) The tire according to claim 5, wherein the incisions are spaced in the circumferential direction with a pitch p which satisfies the following relationship:

$$0.5 \leq \frac{Sne}{Se} \cdot \frac{p}{H} \leq 4$$

wherein, Sne is the total outer surface area of the edge ribs,

Se is the total of the outer surface area of the intermediate ribs, and

H is the average depth of the grooves of generally circumferential direction.

7. (Previously Presented) The tire according to claim 1, wherein the incisions are arcuately shaped in the radial direction.

8. (Previously Presented) The tire according to claim 1, wherein the incisions are formed with at least two rectilinear portions in the radial direction.

9. (Currently Amended) A steer axle tire for a heavy vehicle, the tire designed for a rolling direction and comprising a radial carcass reinforcement surmounted by a crown reinforcement, and a tread , the tire having means indicating the rolling direction, the tread comprising ribs separated by grooves of generally circumferential orientation, two of said ribs forming the edges of the tread, at least two of said ribs being intermediate to such two ribs, each intermediate rib having a plurality of incisions of a width of less than 3 mm, a depth E when the tire is new and

being of generally transverse orientation and substantially parallel to each other, wherein, each incision has a varying inclination, being oriented relative to a line perpendicular to an outer surface of the tread at a first angle of zero degrees from the outer surface to a depth of one-third E when the tread is new, and at a second angle greater than said first angle at a depth greater than one-third E, wherein, a radially innermost first point of each incision is located, relative to the indicated rolling direction of the tire, in front of ~~the~~ a second point of the incision located on the outer surface of the tread when new, wherein each incision ~~includes~~, from its second point to its first point, has a generally concave side and a generally convex side, the generally concave side facing ~~generally toward the outer surface~~ in the rolling direction, and further wherein the edge ribs are not provided with incisions of varying inclination, the incisions are spaced in the circumferential direction with a pitch p which satisfies the following relationship:

$$0.5 \leq \frac{Sne}{Se} \cdot \frac{p}{H} \leq 4$$

wherein, Sne is the total outer surface ~~areas~~ area of the edge ribs,

Se is the total of the surface areas of the intermediate ribs and

H is the average depth of the grooves of generally circumferential direction.

10. (New) The tire according to claim 1 wherein the edge ribs are not provided with any incisions.

11. (New) The tire according to claim 1 wherein the edge ribs are not provided with any incisions.

REMARKS

Reconsideration of the present application is respectfully requested.

The claims have been amended as suggested in section no. 2 of the Official action, and to obviate the rejection made in section no. 4.

Claims 1-11 stand rejected as unpatentable over EP '104 in view of Slomon et al. and MacMillan.

On page 5, lines 5-8 of the Office Action, it is stated, with reference to Fig. 4 of Europe '104 that:

> *the sipes of EP '104, that are arranged in the tread of the tire such that a radially innermost point of each sipe is located relative to the rolling direction of the tire, in front of the point of the sipe located on the running surface of the tread when new. See figures 4 and 5.*

It is not understood how that conclusion has been reached. After again reviewing EP '104, it is applicant's contention that it is not possible to positively determine a direction of rotation in Figs. 4+ of that document, due to the fact that the document does not specify whether the tire is a drive tire or a driven tire, or is being subjected to acceleration or braking forces. It is not even clear what is meant by the force F which is described in column 4, lines 6-7:

> *The block 41 is subjected to the force F of the tire on the ground.*

The words "block...subjected to...force" suggests that the force F is applied to the tread as a reaction to whatever force the tire is applying on the road. But the word "on" in the expression "force of the tire on the ground" suggests that the force F is being applied to the ground.

Even if the nature of the force F were known, the direction of rotation cannot be determined, since the factors of drive tire versus driven tire, or acceleration versus braking force is unspecified. The document does not discuss how a tire is affected differently depending on whether it is a drive tire or a driven tire. Also, the document not specify acceleration or braking; rather, the document discusses the tire being "under stress" or "under load" --see column 4, line 32 (under load), and column 1, line 4a (braking/acceleration).

The lack of precision in specifying these factors can be demonstrated by assuming the tire of Fig. 4 is on a drive tire and is being accelerated in order to achieve the deformation of Fig. 5. In that event, the tire's rolling direction would be counterclockwise in order for the tread blocks to achieve the Fig. 5 configuration. On the other hand, if the Fig. 4 tire is a driven tire subjected to acceleration, the rolling direction would be clockwise to achieve the Fig. 5 deformation. If the Fig. 4 tire is either a drive or driven tire subjected to braking, then the rolling direction would be clockwise.

If the tire of Fig. 7 is an accelerated drive tire, then the rolling direction would be clockwise in order for the tread blocks to be deformed as shown in Fig. 8. However, if the tire of Fig. 7 is an accelerated driven tire, then the rolling direction would be counterclockwise. If the Fig. 7 tire is either a drive or driven tire being subjected to a braking force, then the rolling direction would be counterclockwise.

If one simply assumes that EP '104 intends to be consistent throughout the figures with regard to the direction of rotation, then one would assume a clockwise tolling direction as per Fig. 1. Thus, when considering a clockwise rolling direction in Fig. 4, the radially innermost first point of the incision is not in front of the second

point of the incision located on the running surface, as recited in each of claims 1 and 2.

In Fig. 7 (assuming a clockwise rolling direction), the radially innermost first point is ahead of the second point, but the concave sides of the incisions face counter to the rolling direction, not in the rolling direction as recited in claims 1 and 9.

The fact that EP '104 does not specify rolling directions, or drive versus driven tires, or acceleration versus braking is not surprising, since the invention to which that document is directed merely relates to making the distance separating adjacent incisions become less as the tread becomes worn, in order to compensate for the effects of tread wear. Accordingly, the orientation of the incisions relative to the rolling direction is not deemed crucial in EP '104 and is not specified.

The presently claimed invention, however, seeks to reduce the rate of tread wear and make the wear more uniform, and achieves this by providing the tire with a given rolling direction, and with incisions in the tread's intermediate ribs that are specifically oriented with respect to that rolling direction.

In view of the foregoing amendments and comments allowance of the present claims is respectfully requested.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: XXX

By: _____
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